

REMARKS

Claims 1-43 were examined and reported in the Office Action. Claims 1-43 are rejected. Claims 1, 8-9, 13-14, 19-20, 24-26, 32-33, 37 and 39-42 are amended. Claim 43 is cancelled. Claims 1-42 remain.

Applicant requests reconsideration of the application in view of the following remarks.

I. 35 U.S.C. § 102(e)

It is asserted in the Office Action that claims 14-16, 19-23, 25-28, 32-35 and 37-43 are rejected in the Office Action under 35 U.S.C. § 102(e), as being anticipated by U.S. Patent No. 6,138,092, issued to Zinser Jr. et al. ("Zinser"). Applicant respectfully disagrees.

Applicant's amended claim 14 contains the limitations of "... receive a plurality of signals from a first transmission device; encode the plurality of signals in a compressed format; and transmit the plurality of signals in a compressed format through a transmission medium at variable frame rates based on a plurality of prioritized epoch parameters to dynamically reduce signal bandwidth while preserving perceptual quality of the signals, wherein said prioritized epoch parameters are reduced based on each of said plurality of epoch data parameters respective priority."

Applicant's amended claim 20 contains the limitations of "... receive the plurality of signals in a compressed format through a transmission medium at variable rates based on a plurality of prioritized epoch parameters to reduce signal bandwidth while preserving perceptual quality of the signals; decode the plurality of compressed signals; and transmit the decoded signals to a first receiving device,

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wherein said prioritized epoch parameters are reduced based on each of said plurality of epoch data parameters respective priority."

Applicant's claim 26 contains the limitations of "receiving a plurality of signals from a transmission device; encoding the plurality of signals in a compressed format; and transmitting the plurality of signals in a compressed format through a transmission medium at variable rates based on a plurality of prioritized epoch parameters to reduce signal bandwidth while preserving perceptual quality of the signals, wherein said prioritized epoch parameters are reduced based on each of said plurality of epoch data parameters respective priority."

Applicant's claim 33 contains the limitations of "receiving a plurality of signals in a compressed format through a transmission medium at variable rates based on a plurality of prioritized epoch parameters to reduce signal bandwidth while preserving perceptual quality of the plurality of the signals; decoding the plurality of compressed signals; and transmitting the decoded signals to a receiving device, wherein said prioritized epoch parameters are reduced based on each of said plurality of epoch data parameters respective priority."

Applicant's claim 40 contains the limitations of "means for encoding a plurality of input signals at variable frame rates, the means for encoding including: means for identifying input signal segments; means for extracting a plurality of epoch parameters describing signal segments; and means for associating priority values to the plurality of epoch parameters."

Applicant's claim 42 contains the limitations of "means for decoding a plurality of compressed signals; the decoding means including: means for reconstructing parameters from the plurality of compressed signals; means for constructing an excitation signal; means for producing a raw output signal; and means for producing a final output signal, wherein the means for decoding comprises decompressing the plurality of compressed signals at variable frame rates

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based on a plurality of prioritized epoch parameters to dynamically reduce signal bandwidth while preserving perceptual signal quality."

In other words, Applicant's claimed invention relates to Apparatus, methods and processes using a dynamic variable frame rate technique for compressing and decompressing digitized audio signals. Applicant's claimed invention dynamically adjusts the frame rate required for transmission based on a plurality of prioritized epoch parameters (i.e., reducing the epoch parameters based on their respective priorities) to dynamically reduce signal bandwidth while preserving perceptual signal quality.

According to MPEP 2131, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.' (Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). 'The identical invention must be shown in as complete detail as is contained in the ... claim.' (Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e., identity of terminology is not required. (In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990))."

Zinser discloses a code book technique for tracking and reproducing pitch and voice decisions using an encoder and a decoder subsystem. The invention disclosed by Zinser incorporates a process for dealing with pitch harmonics outside the normal framing range of linear prediction coding (LPC) voice encoders. It is asserted in the Office Action that Zinser teaches "compression of signals at variable frame rates is performed dynamically." (Office Action, page 6, first paragraph). Applicant strongly disagrees. There is simply no disclosure in Zinser dealing with variable frame rates. Zinser does disclose variable data transmission rates, but not a varying frame rate. There are many places in Zinser where fixed frame rate is discussed (See,

e.g., Zinser, column 10, lines 52-53; claim 5). It should be noted that frame rate, bandwidth rate and data rate all have different meanings in the art.

Further, Zinser does not teach, disclose or suggest transmitting a plurality of signals in a compressed format through a transmission medium at variable frame rates based on a plurality of prioritized epoch parameters to dynamically reduce signal bandwidth while preserving perceptual quality of the signals, wherein said prioritized epoch parameters are reduced based on each of said plurality of epoch data parameters respective priority. In fact, Zinser specifies that epoch parameters are held constant. (See Zinser, column 15, line 55 to column 16, line30).

Therefore, since Zinser does not disclose, teach or suggest all of Applicant's amended claims 14, 20, 26, 33, 40 and 42 respective limitations as listed above, Applicant respectfully asserts that a *prima facie* rejection under 35 U.S.C. § 102(b) has not been adequately set forth relative to Zinser. Thus, Applicant's amended claims 14, 20, 26, 33, 40 and 42 are not anticipated by Zinser. Additionally, the claims that depend directly or indirectly on claims 14, 20, 26, 33 and 40, namely claims 15-16 and 19, 21-23 and 25, 27-28 and 32, 34-35 and 37-39, and 41, respectively, are also not anticipated by Zinser for the above same reason.

Accordingly, withdrawal of the 35 U.S.C. § 102(e), rejections for claims 14-16, 19-23, 25-28, 32-35 and 37-43 is respectfully requested.

II. 35 U.S.C. § 103(a)

It is asserted in the Office Action that claims 1-13, 17-18, 23, 29-30 and 36 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over Zinser in view of U.S. Patent No. 5,809,459, issued to Begstrom et al. ("Begstrom"). Applicant respectfully disagrees.

Applicant's amended claim 1 contains the limitations of "[a]n encoder comprising: an epoch locator coupled to a frame assembly, a primary epoch analyzer coupled to the epoch locator, and a secondary epoch analyzer coupled to the primary epoch locator, wherein the encoder compresses a plurality of signals at variable frame rates based on a plurality of prioritized epoch parameters to dynamically reduce signal bandwidth while preserving perceptual signal quality, wherein said prioritized epoch parameters are reduced based on each of said plurality of epoch data parameters respective priority."

Applicant's amended claims 14, 20, 26 and 33 limitations are listed above in section I.

According to MPEP 2142 "[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." (*In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

Applicant's claimed invention relates to Apparatus, methods and processes using a dynamic variable frame rate technique for compressing and decompressing digitized audio signals. Applicant's claimed invention dynamically adjusts the frame rate required for transmission based on a plurality of prioritized epoch parameters (i.e., reducing epoch parameters based on their respective priorities) to dynamically reduce signal bandwidth while preserving perceptual signal quality.

As discussed above in section I, Zinser does not teach, disclose or suggest the limitations disclosed in Applicant's amended claims 14, 20, 26 and 33. Further, Applicant's amended claim 1 contains the limitations of "the encoder compresses a plurality of signals at variable frame rates based on a plurality of prioritized epoch parameters to dynamically reduce signal bandwidth while preserving perceptual signal quality, wherein said prioritized epoch parameters are reduced based on each of said plurality of epoch data parameters respective priority." Zinser does not teach, disclose or suggest these limitations.

Begstrom discloses a method for extracting and tracking pitch using orthogonal error waveforms. Begstrom does not teach, disclose or suggest "the encoder compresses a plurality of signals at variable frame rates based on a plurality of prioritized epoch parameters to dynamically reduce signal bandwidth while preserving perceptual signal quality, wherein said prioritized epoch parameters are reduced based on each of said plurality of epoch data parameters respective priority." Moreover, Begstrom does not teach, disclose or suggest the limitations contained in Applicant's amended claims 14, 20, 26 and 33, as listed above.

Even if one considered combining the teachings of Zinser and Begstrom together, one would simply not arrive at Applicant's claimed invention with respect to Applicant's claims 1, 14, 20, 26 and 33. Compared to this combination, the combination simply would not teach, disclose or suggest all the limitations contained in Applicant's amended claims 1, 14, 20, 26 and 33.

Since neither Zinser, Begstrom, nor the combination of the two, disclose, teach or suggest all the limitations contained in Applicant's amended claims 1, 14, 20, 26 and 33, as listed above, there would not be any motivation to arrive at Applicant's claimed invention. Thus, Applicant's amended claims 1, 14, 20, 26 and 33 are not obvious over Zinser in view of Begstrom since a *prima facie* case of obviousness has not been met under MPEP 2142. Additionally, the claims that

directly or indirectly depend from Applicant's amended claims 1, 14, 20, 26 and 33,
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namely claims 2-13, 17-18, 23, 29-30, and 36, respectively, are also not obvious over Zinser in view of Begstrom for the above same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection for claims 1-13, 17-18, 23, 29-30 and 36 is respectfully requested.

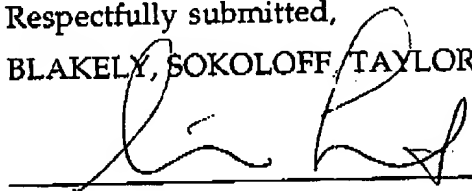
CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely Claims 1-42, patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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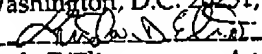

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April 9, 2003

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